

AMENDMENTS TO THE CLAIMS

The following represents a listing of the current status of all claims submitted in the application including the current amendments which include cancellation of the original slate containing claims 1-24 and substitution of the following claims 25-52:

Listing of Claims

25(new). A refuse collection vehicle for loading, compacting, transporting and ejecting refuse materials comprising:

- (a) a hollow refuse storage enclosure for containing compacted refuse having a forward refuse receiving opening, and a rear refuse discharge opening closed by a tailgate;
- (b) a generally full width charging hopper disposed forward of said storage enclosure for receiving refuse from refuse containers, said charging hopper having sidewalls and a floor and being in communication with said refuse receiving opening of said storage enclosure;
- (c) a followerless packer-ejector panel mechanism for moving refuse materials deposited in said charging hopper from said charging hopper into said storage enclosure, packing said refuse materials into said storage enclosure and fully ejecting said refuse materials from said storage enclosure without the need of a follower panel;
- (d) one or more container handling devices selected from the group consisting of side-loading and front-loading container handling devices and a combination thereof

- for emptying containers into said charging hopper;
- (e) control system for controlling the operation of said packer-ejector panel in relation to said container handling device; and
 - (f) wherein said control system includes controls to provide said ejector panel mechanism with a plurality of selectable packing stroke cycles of different lengths and time durations in the packing mode including a packing stroke cycle of shorter time duration than an emptying cycle of a corresponding container handling device such that said packer-ejector panel returns to a fully forward position before a new emptying cycle can allow deposit of material behind said packer-ejector panel.

26(new). A vehicle as in claim 25 wherein said packing stroke cycles include at least a short sweep cycle and a full packing cycle.

27(new). A vehicle as in claim 25 wherein said control system selects a packing stroke cycle based on said corresponding container handling device in use being a front-loading or a side-loading device.

28(new). A vehicle as in claim 26 wherein said control system selects said packing stroke cycle based on a count of loading operations.

29(new). A vehicle as in claim 25 wherein said packer-ejector panel mechanism is operated by a pair of crossing, telescoping linear operators.

30(new). A vehicle as in claim 29 wherein said telescoping linear operators are hydraulic cylinders.

31(new). A vehicle as in claim 25 including a truck chassis.

32(new). A vehicle as in claim 25 wherein said one or more

container handling devices includes both a side-loading and a front-loading device.

33(new). A vehicle as in claim 28 wherein said one or more container handling devices comprise a side-loading device.

34(new). A side-loading, refuse collection vehicle for loading, compacting, transporting and ejecting refuse materials comprising:

- (a) a hollow refuse storage enclosure for containing compacted refuse having a forward refuse receiving opening, and a rear refuse discharge opening including a tailgate;
- (b) a generally full width charging hopper disposed forward of said storage enclosure for receiving refuse from refuse containers, said charging hopper having sidewalls and a floor and being in communication with said refuse receiving opening of said storage enclosure;
- (c) a followerless packer-ejector panel mechanism for moving refuse materials deposited in said charging hopper from said charging hopper into said storage enclosure, packing said refuse materials into said storage enclosure and fully ejecting said refuse materials from said storage enclosure without the need of a follower panel;
- (d) a side-loading container handling system mounted from said vehicle capable of a handling cycle including lateral operation to access, empty and replace containers located to the side of said vehicle and which, when retracted, has a sufficiently narrow profile that fits within the lateral confines of the truck body;
- (e) control system for controlling the operation of said

packer-ejector panel in relation to said container handling device; and

- (f) wherein said control system includes controls to provide said ejector panel mechanism with a plurality of selectable packing stroke cycles of different lengths and time durations in the packing mode including a packing stroke cycle of shorter time duration than an emptying cycle of a corresponding container handling device such that said packer-ejector panel returns to a fully forward position before a new emptying cycle can allow deposit of material behind said packer-ejector panel.

35(new). A vehicle as in claim 34 wherein said container handling device includes an arm and a converging grabber and wherein said arm is mounted from a laterally extendable device.

36(new). A vehicle as in claim 35 wherein said laterally extendable device is a telescoping device.

37(new). A vehicle as in claim 34 wherein said arm of said container handling system further includes articulated linkage enabling a container to be maintained in a generally upright position until it is tipped into said charging hopper.

38(new). A vehicle as in claim 34 wherein said packing stroke cycles include at least a short sweep cycle and a full cycle.

39(new). A vehicle as in claim 38 wherein said control system selects said packing stroke cycle based on a count of loading operations.

40(new). A vehicle as in claim 37 wherein said packing stroke cycles include at least a short sweep cycle and a full cycle.

41(new). A vehicle as in claim 40 wherein said control system selects said packing stroke cycle based on a count of

loading operations.

42(new). A vehicle as in claim 34 wherein said packer-ejector panel mechanism is operated by a pair of crossing, telescoping hydraulic cylinders.

43(new). A vehicle as in claim 34 including a truck chassis.

44(new). A vehicle as in claim 25 including a front loading container handling device.

45(new). A vehicle as in claim 44 wherein said front loading container handling device is the only loading device.

46(new). A vehicle as in claim 45 including a truck chassis.

47(new). A vehicle as in claim 28 wherein said packing stroke cycle is microprocessor controlled.

48(new). A side-loading refuse collection vehicle for loading, compacting, transporting and ejecting refuse materials comprising:

- (a) a hollow refuse storage enclosure for containing compacted refuse having a forward refuse receiving opening, and a rear refuse discharge opening including a tailgate;
- (b) a generally full width charging hopper disposed forward of said storage enclosure for receiving refuse from refuse containers, said charging hopper having sidewalls and a floor and being in communication with said refuse receiving opening of said storage enclosure;
- (c) a packer-ejector panel mechanism for moving refuse materials deposited in said charging hopper from said charging hopper into said storage enclosure, packing said refuse materials into said storage enclosure and fully ejecting said refuse materials from said storage

enclosure;

- (d) a side-loading container handling system mounted from said vehicle including a laterally extending device carrying a container lift and dump mechanism which includes a pivoting lift and empty mechanism having a pair of spaced main arms outwardly flanked by a pair of link arms, said main arms being connected to be pivoted at a fixed end by a double-ended hydraulic rotary actuator and journaled on a main arm common pin at a free end, said link arms being journaled to said mechanism at a fixed end and journaled on a link arm common pin at a free end, said link arm common pin being located at a fixed offset from said main arm common pin and a container grabbing device having opposed arms mounted in fixed relation to said fixed offset of said pins such that in the lowered stored position said main arms and said link arms align to provide a narrow profile which does not extend beyond the width of said collection vehicle when said lift and dump device is stowed next to said charging hopper.

49(new). A vehicle as in claim 34 wherein said side loading container handling device further contains a container lift and dump mechanism which includes a pivoting lift and empty mechanism having a pair of spaced main arms outwardly flanked by a pair of link arms, said main arms being connected to be pivoted at a fixed end by a double-ended hydraulic rotary actuator and journaled on a main arm common pin at a free end, said link arms being journaled to said mechanism at a fixed end and journaled on a link arm common pin at a free end, said link arm common pin

being located at a fixed offset from said main arm common pin and a container grabbing device having opposed arms mounted in fixed relation to said fixed offset of said pins such that in the lowered stored position said main arms and said link arms align to provide a narrow profile which does not extend beyond the width of said collection vehicle when said lift and dump device is stowed next to said charging hopper.

50(new). A method of operating a refuse collection vehicle including a hollow refuse storage enclosure for containing compacted refuse having a forward refuse receiving opening and a rear refuse discharge opening closed by a tailgate; a generally full-width charging hopper disposed forward of said storage enclosure for receiving refuse from refuse containers, said charging hopper having side walls and a floor and being in communication with said refuse receiving opening of said storage enclosure; a followerless packer-ejector panel mechanism for moving refuse deposited in said charging hopper from said charging hopper into said storage enclosure; one or more container handling devices selected from the group consisting of side-loading and front-loading container handling devices for emptying containers in a said charging hopper and a control system for controlling the operation of said packer-ejector panel in relation to said container handling devices, said method including steps of:

- 1) operating said packer-ejector mechanism on a short stroke cycle in coordination with a front or side-loading device enabling said ejector panel to return to a fully forward position between container emptying cycles to promote rapid loading of said charging hopper.

51(new). A method as in claim 50 wherein said vehicle includes a side-loading container handling device and including the step of operating said packer-ejector in full packing strokes based on a count of short-stroke loading operations to promote rapid loading of said storage hopper.

52(new). A method as in claim 50 including the step of selecting a packing stroke cycle based on a corresponding container handling device in use being a front-loading or side-loading device.